

## Electrical and Mechanical Preventative Maintenance



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### Thursday 12:10 PM

- Lights dimmed and power shut down
- Generator running
- Fire Alarm Active
- Room had visible smoke shoulder height and above
- All Electrical and Gas checked
- No cause found Fire Department gave all clear to occupy the building

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## Friday 2:10 PM

- Loud Arching heard from Electrical Room
- Events of Thursday took place
- Basement filled with smoke
- Pre Action Fire Alarm was triggered
- All systems shut down and Building evacuated

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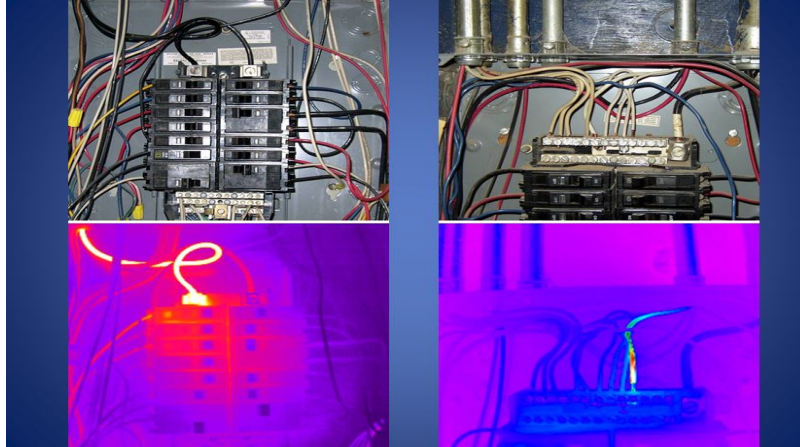
## Related Costs

- Restoration of Finishes Approximately \$10,000
- Replacement of UPS \$58,000
- Complete replacement of 3,000 Amp Main Electrical Distribution \$413,000
- Supporting equipment and fuel \$6,000
- Lost labor costs \$4,500 per hour.
- Total cost \$535,000

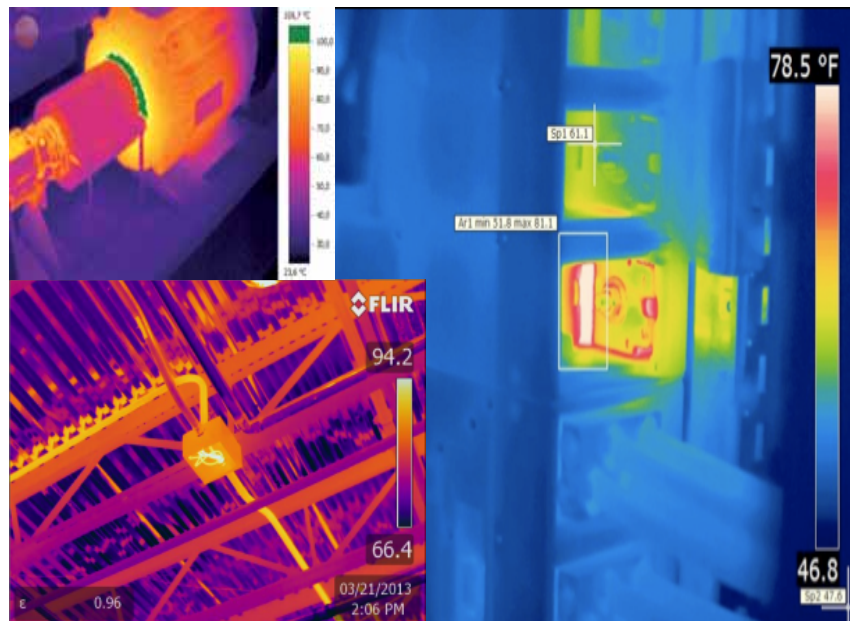
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## Preventative techniques for Electrical Maintenance

- Infrared Scanning



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## Infrared uses

- Electrical trouble shooting and preventative care
- Motor and bearings
- Boilers and Chillers
- Steam traps
- Plumbing
- Leak detection in walls and ceilings

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## Other means and methods for Electrical Maintenance

- Shut down and tighten
- Ultrasonic testing

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## Boiler/Chiller care



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## Scenario

- Receive a call that the Fire sprinkler system has activated at 10:30 PM
- On site manager arrives and the sprinkler head in the Boiler room had failed
- 165 degree head
- Over the next week we checked boilers and suppression and everything checked out as operational

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## Second event

- One week later same scenario as the first 10:37 PM
- Same head failed only this head was a 225 degree
- Boiler operates at 180 degree's and was producing steam
- Replaced all controls, tore boilers down and cleaned.

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## Basic Chiller/Boiler care

- Tear down and clean annually
- Test Water Treatment no less than weekly
- Clean all strainers or bag filters regularly
- Test all safeties monthly
- Clean all condensing until or towers as needed
- Maintain all mechanical linkages for equipment

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